

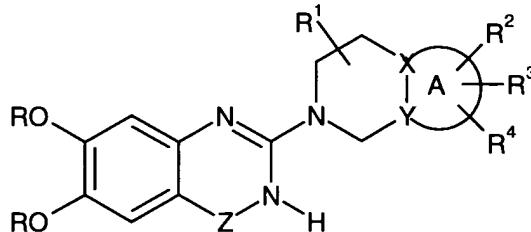
IN THE SPECIFICATION:

In the paragraph beginning at page 4, line 9, and ending at page 8, line 4, please make the following amendments:

SUMMARY OF THE INVENTION

a'

This invention relates to compounds comprising Formula I:



I

wherein:

X is carbon or nitrogen; Y is carbon; and X-Y considered together are two adjoining atoms of the ring A, said ring being a fused aromatic ring of five to six atoms per ring optionally incorporating one to two heteroatoms per ring, chosen from N, O, or S; and wherein, when X is nitrogen, the bond between atoms X and Y is a single bond, and when X and Y are both carbon, the bond between atoms X and Y is double bond;

Z is -C(O)- or -S(O)₂-;

R is lower alkyl;

R¹ is hydrogen; lower alkyl;

aryl, arylalkyl, arylaminocarbonyl,

wherein the aryl group is optionally substituted with one to two substituents selected from the group consisting of lower alkyl, halo, cyano, and lower alkoxy;

heteroaryl or heteroarylalkyl,

wherein the heteroaryl group is optionally substituted with one to two substitutents selected from the group consisting of lower alkyl, halogen, cyano, and lower alkoxy;

a R², R³, and R⁴ are each independently in each occurrence hydrogen; lower alkyl; cycloalkyl or cycloalkylalkyl, wherein the cycloalkyl group is optionally substituted with one or more substitutents selected from the group consisting of hydroxy, cyano, lower alkyl, lower alkoxy, halogen-lower alkoxy, alkylthio, haloalkyl, hydroxylalkyl, nitro, alkoxy carbonyl, amino, alkylamino, alkylsulfonyl, arylsulfonyl, alkylaminosulfonyl, arylaminosulfonyl, alkylsulfonylamino, arylsulfonylamino, alkylaminocarbonyl, alkylcarbonylamino, and phenyl optionally substituted with one or two substitutents selected from the group consisting of lower alkyl, halogen, cyano, and lower alkoxy;

aryl or arylalkyl, wherein the aryl group is optionally substituted with one or more substitutents selected from the group consisting of hydroxy, cyano, lower alkyl, lower alkoxy, halogen-lower alkoxy, alkylthio, halogen, haloalkyl, hydroxylalkyl, nitro, alkoxy carbonyl, amino, alkylamino, alkylsulfonyl, arylsulfonyl, alkylaminosulfonyl, arylaminosulfonyl, alkylsulfonylamino, arylsulfonylamino, alkylaminocarbonyl, arylaminocarbonyl, alkylcarbonylamino, and arylcarbonylamino, or two adjacent atoms of the aryl ring can be substituted with a methylenedioxy or ethylenedioxy group;

heterocyclyl or heterocyclylalkyl, wherein the heterocyclyl group is optionally substituted with one or more substitutents selected from the group consisting of hydroxy, hydroxylalkyl, oxo, cyano, cyanoalkyl, lower alkyl, lower alkoxy, alkoxyalkyl, halogen-lower alkoxy, alkylthio, halogen, haloalkyl, nitro, alkoxy carbonyl, amino, alkylamino, alkylsulfonyl, arylsulfonyl,

Q1
alkylaminosulfonyl, arylaminosulfonyl, alkylsulfonylamino, arylsulfonylamino, alkylaminocarbonyl, arylaminocarbonyl, alkylcarbonylamino, and arylcarbonylamino and phenyl optionally substituted with one or two substituents selected from the group consisting of lower alkyl, halogen, cyano and lower alkoxy;

heteroaryl or heteroarylalkyl,

wherein the heteroaryl group is optionally substituted with one or more substituents selected from the group consisting of hydroxy, cyano, lower alkyl, lower alkoxy, halogen-lower alkoxy, alkylthio, halogen, haloalkyl, hydroxyalkyl, nitro, alkoxycarbonyl, amino, alkylamino, alkylsulfonyl, arylsulfonyl, alkylaminosulfonyl, arylaminosulfonyl, alkylsulfonylamino, arylsulfonylamino, alkylaminocarbonyl, arylaminocarbonyl, alkylcarbonylamino, and arylcarbonylamino;

hydroxy; hydroxyalkyl; alkoxy; alkoxyalkyl;

halo; haloalkyl; cyano; cyanoalkyl;

$-(CH_2)_{0-3}NR'R''$; $-C(NH)-NR'R''$; $-N-C(NR')-R''$; $-N=CR'-NR'R''$; $-SO_2NR'R''$;
 $-NSO_2R'$; $-C(O)R'$; $-C(O)NR'R''$; or $-NC(O)R'$; or $N=R''$;

with the proviso that if A is a fused benzene ring, at least one of R^2 , R^3 or R^4 is not hydrogen; or

R^2 and R^3 , if adjacent, taken together with the carbons to which they are attached may also form a 5- to 7- membered aromatic, saturated or unsaturated ring, optionally incorporating one or two ring heteroatoms chosen from N, O, or S, and optionally substituted with one or two substituents selected from the group consisting of lower alkyl, halo, haloalkyl, cyano, alkylthio, and lower alkoxy; and

R' and R'' are independently in each occurrence

hydrogen; lower alkyl; substituted lower alkyl; hydroxyalkyl; alkoxyalkyl; cycloalkyl, wherein the cycloalkyl group optionally substituted with one or more substituents selected from the group consisting of hydroxy, cyano, lower alkyl, lower alkoxy, halo-lower alkoxy, alkylthio, halogen,

haloalkyl, hydroxyalkyl, nitro, alkoxycarbonyl, amino, alkylamino, alkylsulfonyl, arylsulfonyl, alkylaminosulfonyl, arylaminosulfonyl, alkylsulfonylamino, arylsulfonylamino, alkylaminocarbonyl, arylaminocarbonyl, alkylcarbonylamino, arylcarbonylamino, and phenyl;

aryl or arylalkyl, wherein the aryl group is optionally substituted with one or more substituents selected from the group consisting of hydroxy, cyano, lower alkyl, lower alkoxy, halogen-lower alkoxy, alkylthio, halogen, haloalkyl, hydroxyalkyl, nitro, alkoxycarbonyl, amino, alkylamino, alkylsulfonyl, arylsulfonyl, alkylaminosulfonyl, arylaminosulfonyl, alkylsulfonylamino, arylsulfonylamino, alkylaminocarbonyl, arylaminocarbonyl, alkylcarbonyl-amino, and arylcarbonylamino, or two adjacent atoms of the aryl ring can be substituted with a methylenedioxy or ethylenedioxy group;

heteroaryl or heteroarylalkyl, wherein the heteroaryl group is optionally substituted with one or more substituents selected from the group consisting of hydroxy, cyano, lower alkyl, lower alkoxy, halogen-lower alkoxy, alkylthio, halogen, haloalkyl, hydroxyalkyl, nitro, alkoxycarbonyl, amino, alkylamino, alkylsulfonyl, arylsulfonyl, alkylaminosulfonyl, arylaminosulfonyl, alkyl-sulfonylamino, arylsulfonylamino, alkylaminocarbonyl, arylaminocarbonyl, alkylcarbonylamino, and arylcarbonylamino;

heterocycl or heterocyclalkyl, wherein the heterocycl group is optionally substituted with one or more substituents selected from the group consisting of hydroxy, oxo, cyano, cyanoalkyl, lower alkyl, lower alkoxy, halogen-lower alkoxy, alkylthio, halogen, haloalkyl, hydroxyalkyl, nitro, alkoxycarbonyl, amino, alkylamino, alkylsulfonyl, arylsulfonyl, alkylaminosulfonyl, arylaminosulfonyl, alkylaminosulfonyl, arylsulfonylamino, alkylaminocarbonyl, arylaminocarbonyl, alkylcarbonylamino, and arylcarbonylamino;

Q'

or R' and R" together with the nitrogen to which they are attached ~~to~~ may ~~also~~ form a 5- to 7- membered ring, optionally incorporating one additional ring heteroatom chosen from N, O, or S, wherein said ring can be substituted with one or two substituents selected from the group consisting of lower alkyl, halogen, cyano, ~~and~~ lower alkoxy; and phenyl optionally substituted with one or two substituents selected from the group consisting of lower alkyl, halogen, cyano and lower alkoxy;

R'' is selected from heterocyclyl optionally substituted with one or two substituents selected from the group consisting of hydroxy, oxo, cyano, cyanoalkyl, lower alkyl, or lower alkoxy;

or prodrugs, individual isomers, racemic or non-racemic mixtures of isomers, or salts or solvates thereof.

In the paragraphs beginning at page 10, line 11, and ending at page 11, line 16, make the following amendments:

Q 2

Another preferred embodiment includes a group of compounds wherein R¹ is hydrogen, and R² is -(CH₂)₀₋₃NR'R" or -SO₂NR'R", wherein R' and R" are independently in each occurrence selected from hydrogen, lower alkyl, substituted lower alkyl, cycloalkyl, aryl, arylalkyl, heteroaryl, and heteroarylalkyl, or and R' and R" together with the nitrogen to which they are attached may ~~also~~ form a 5- to 7- membered ring, optionally incorporating one additional ring heteroatom chosen from N, O, or S.

Another preferred embodiment includes compounds wherein X is carbon and A is a fused benzene ring, and R² is -(CH₂)₀₋₃NR'R" or -SO₂NR'R", wherein R' and R" are independently in each occurrence selected from hydrogen, lower alkyl, substituted lower alkyl, cycloalkyl, aryl, arylalkyl, heteroaryl, and heteroarylalkyl, or and R' and R" together with the nitrogen to which they are attached may ~~also~~ form a 5- to 7- membered ring, optionally incorporating one additional ring heteroatom chosen from N, O, or S; and

within this category one subgroup includes compounds wherein Z is -C(O)-, and another subgroup includes compounds wherein Z is -S(O)₂-.

A²
In another embodiment X is carbon, A is a fused benzene ring, and R² is selected from the groups -C(NH)-NR'R'', -N-C(NR')-R'', and -N=CR'-NR'R'', wherein R' and R'' are independently in each occurrence selected from hydrogen, lower alkyl, substituted lower alkyl, cycloalkyl, aryl, arylalkyl, heteroaryl, and heteroarylalkyl, or and R' and R'' together with the nitrogen to which they are attached may also form a 5- to 7-membered ring, optionally incorporating one additional ring heteroatom chosen from N, O, or S, and within this category one subgroup includes compounds wherein Z is -C(O)-

Another embodiment includes compounds wherein R¹ is hydrogen, X is carbon, A is a fused benzene group and R² is aryl or heteroaryl.

Another embodiment includes compounds wherein R¹ is hydrogen, X is carbon, A is a fused benzene group and R² is alkoxy, cyano, or cyanoalkyl.

Another preferred embodiment includes compounds wherein R¹ is hydrogen, and R² is -(CH₂)₀₋₃NR'R'' or -SO₂NR'R'', wherein R' and R'' are independently in each occurrence selected from hydrogen, lower alkyl, substituted lower alkyl, cycloalkyl, aryl, arylalkyl, heteroaryl, and heteroarylalkyl, or and R' and R'' together with the nitrogen to which they are attached may also form a 5- to 7- membered ring, optionally incorporating one additional ring heteroatom chosen from N, O, or S; X is carbon and A is a fused pyrimidine ring; within this category one subgroup includes compounds wherein Z is -C(O)-, and another subgroup includes compounds wherein Z is -S(O)₂-.

In another embodiment R² is -NR'R'', and wherein R' and R'' together with the nitrogen to which they are attached may also form a 5- to 7- membered ring, optionally incorporating one additional ring heteroatom chosen from N, O, or S.

In the paragraph beginning at page 11, line 25, and ending at page 11, line 28, make the following amendments:

Q3
"Alkyl" means the monovalent linear or branched saturated hydrocarbon radical, having from one to eight ~~six~~ carbon atoms inclusive, unless otherwise indicated.

Examples of ~~lower~~ alkyl radicals include, but are not limited to, methyl, ethyl, propyl, isopropyl, 1-ethylpropyl, *sec*-butyl, *tert*-butyl, n-butyl, n-pentyl, n-hexyl, and the like.

In the paragraph beginning at page 12, line 3, and ending at page 12, line 10, make the following amendments:

Q4
"Substituted lower alkyl" means the lower alkyl as defined herein, including one to three substituents, preferably one substituent such as hydroxyl, hydroxy, alkoxy, amino, amido, carboxyl, acyl, halogen, cyano, thiol, cycloalkyl, aryl, heterocycl, and heteroaryl. These groups may be attached to any carbon atom of the lower alkyl moiety. Examples of substituted lower alkyl radicals include, but are not limited to, acetic acid 1-methyl-2-ylethylester, methoxyethyl, 4-hydroxy-butyl, 2-amino-3-phenyl-propyl, 4-hydroxy-2,2-dimethylbutyl, 4-hydroxy-3,3-dimethyl-butyl, 4-amino-3,3-dimethyl-butyl, trifluorobutyl and the like.